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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,836	Applicant(s) SCHOBBEN ET AL.
	Examiner Ke Xiao	Art Unit 2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 04 June 2010.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-5 and 8-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-5 and 8-22 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 8-10, 12, 14-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Hamon (US 2005/0179653 A1).

Regarding **Claims 1 and 16**, Yamazaki teaches a scanning display apparatus and method of operation (Yamazaki, Fig. 1 scanning display) comprising:

(a) a display operable:

(i) to receive one or more driver signals and generate corresponding visual information for presentation on the display (Yamazaki, Fig. 1 display portions receive driver signals and generate images); and

(ii) to sense radiation received at the display and generate one or more sensing signals corresponding to a region proximate to the display (Yamazaki, Fig. 1 sensing portion senses radiation from pen); and

(b) computer hardware coupled to the display for generated the one or more driver signals for the display and for receiving the one or more sensing signals from the display (Yamazaki, Fig. 1 source and gate drivers), the computer hardware being

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operable to provide an interactive use interface at the display (Yamazaki, Figs. 15A-B and 21A-B);

Yamazaki fails to teach that the apparatus is configured to sense objects and adapt the visual information of the display as claimed.

Ikeda teaches an apparatus which is configured to sense one or more objects when placed on or positioned in proximity to the display and obscuring at least part of the visual information displayed on the display (Ikeda, Figs. 35-38, sliding body blocks part of the display), and to adapt the visual information for display on the unobscured parts of the display which are unobscured by the one or more objects (Ikeda, Figs. 35-38, display is adapted to show visual information in unobscured area).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the de-energizing feature of Ikeda to the display device of Yamazaki in order to reduce power consumption.

Yamazaki in view of Ikeda fails to teach "by moving the at least part of the visual information from obscured parts of the display to the unobscured parts of the display for display substantially all the visual information on the unobscured parts". Hamon teaches moving at least part of the visual information from obscured parts of the display to the unobscured parts of the display for display substantially all the visual information on the unobscured parts (Hamon, Figs. 4 and 5 a smaller compressed version of the GUI is shown on only the unobscured part). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Hamon's "moving" technique in combination with the cropping technique of Yamazaki in view of Ikeda in order to

provide a more flexible interface for the user so that the user can view more information at the same time but at a lower resolution.

Regarding **Claims 3 and 17**, Yamazaki further teaches that the display is operable to generate light radiation for illuminating the one or more objects placed in proximity to or on the display (Yamazaki, paragraph [0053]) and also for receiving at least part of the light radiation reflected from the one or more objects so as to enable the apparatus to assimilate a scanned image of the one or more objects (Yamazaki, paragraph [0053]).

Regarding **Claim 8**, Yamazaki in view of Ikeda and Hamon further teaches presenting the user interface in squeezed format when the unobscured part of the display is insufficiently large to include the entire user interface (Ikeda Figs. 35-38 and Hamon, Figs. 4 and 5).

Regarding **Claim 9**, Yamazaki in view of Ikeda and Hamon further teaches that the user interface includes a scrolling feature for use in accessing squeezed parts of the user interface presented on the display (Ikeda, Fig. 36A-B directional buttons).

Regarding **Claim 10**, Yamazaki in view of Ikeda and Hamon further teaches a minimum display size limit for the user interface is defined in the computer hardware such that obscuring more of the display than defined by the display size limit causes the computer hardware to present at least part of the user interface in a squeezed format (Ikeda Figs. 35-38 limit is 100% revealed. If less than 100% revealed then display a squeezed portion of the display).

Regarding **Claim 12**, Yamazaki further teaches that the computer hardware in conjunction with the display is operable to identify one or more objects in proximity to or in contact with the display and invoke one or more corresponding software application for executing in the computer hardware in response to placement of the one or more objects (Yamazaki, paragraph [0178]).

Regarding **Claim 14**, Yamazaki further teaches wherein the display comprises one or more pixel devices capable of both:

- (a) generating or transmitting illumination (Yamazaki, Fig. 1 display portion transmits light); and
- (b) sensing illuminating incident thereupon (Yamazaki, Fig. 1 sensing portion senses radiation from pen), the one or more pixel devices being fabricated using one or more of:
- (c) liquid crystal display device with associated TFTs configured to function as a light sensor (Yamazaki, paragraph [0034-0035]).

Regarding **Claim 15**, Yamazaki further teaches the display apparatus of claim 1 adapted for using in computer monitors (Yamazaki, paragraph [0391]).

Regarding **Claim 18**, Yamazaki in view of Ikeda and Hamon further teaches wherein the visual information is adapted so that all the visual information is displayed on the unobscured parts (Hamon, Figs. 4 and 5).

Regarding **Claim 19**, Yamazaki in view of Ikeda and Hamon inherently teaches wherein the computer hardware is configured to form a halo surrounding a footprint of the one or more objects to provide an indication of sensing the one or more object, and

wherein the computer hardware is configured to removed the halo upon removal of the one or more objects from the proximity of the display (Ikeda, Figs. 36A and 36B, specifically since half the display is turned off the edge of the top half of the display is turned on can be considered a halo for the purposes of the claimed invention, as can be seen from the applicant's own disclosure, the halo need not completely surround the object, only bordering the object).

Regarding **Claim 21**, Yamazaki further teaches wherein the computer hardware is configured to determine an identity of a user from detection of the one or more objects, and to present preferred visual information preferred by the user (Yamazaki, Fig. 21A paragraphs [0397-400]).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Hamon (US 2005/0179653 A1) as applied to Claims 1, 3, 4, 8-10, 12, 14-21 above, and further in view of Baur (US 5,610,629).

Regarding **Claim 2**, Yamazaki further teaches the apparatus being arranged to identify positions of the one or more objects placed in proximity of the display by way of input device illumination to the apparatus obscured by the one or more objects (Yamazaki, Fig. 1 sensing portions).

Yamazaki in view of Ikeda and Hamon fails to teach obscured *ambient* illumination as claimed. Baur teaches identifying position of one or more objects placed

in proximity of the display by way of ambient illumination to the apparatus obscured by one or more objects (Baur, Col. 4 lines 20-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamazaki in view of Ikeda and Hamon's display to identify positions using ambient illumination as well as input device illumination, as taught by Baur, in order to provide a more energy efficient mode of touch detection.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Hamon (US 2005/0179653 A1) as applied to claims 1, 3, 8-10, 12, 14-19 and 21 in further view of Masters (US 6429857 B1).

Regarding **Claim 4**, Yamazaki fails to teach that the computer hardware is operable to execute a first coarser scan to determine spatial location of the one or more objects on or in proximity to the display, and then execute a finer scan to assimilate finer details of the one or more objects.

Masters teaches a coarse scan operated after a fine scan (Masters, Figs. 5 and 6). The examiner notes that the touch screen technology is not the same, however the principle of operating a coarse scan and a fine scan in a touch screen environment is taught by Masters and can easily be applied to the device of Yamazaki simply by omitting sensing elements. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a coarse and then a fine scan as taught by Masters in

the system of Yamazaki in view of Ikeda and Hamon in order to increasing the speed and accuracy of the scanning system.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Hamon (US 2005/0179653 A1) as applied to Claims 1, 3, 8-10, 12, 14-19 and 21 above, and further in view of Yamamoto (US 5,742,279).

Regarding **Claim 5**, Yamazaki in view of Ikeda and Hamon fails to teach that the computer hardware is operable to present a representation of the one or more objects in a region of the display in which the one or more objects were placed during scanning as confirmation of successful completed scanning.

Yamamoto teaches computer hardware operable to present a representation of the one or more objects in a region of the display in which the one or more objects were placed during scanning as confirmation of successful completed scanning (Yamamoto, Col. 2 lines 15-22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the presentation system of Yamamoto to the display system of Yamazaki in view of Ikeda and Hamon in order to provide active feedback to the user as it relates to scanning.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Hamon (US

2005/0179653 A1) as applied to Claims 1, 3, 8-10, 12, 14-19 and 21 above, and further in view of Macinnes (WO 00/75766).

Regarding **Claim 13**, Yamazaki in view of Ikeda and Hamon fails to teach animated icons as claimed. Macinnes teaches one or more software application are operable to generate one or more animated icons on the display which appear in surrounding spatial proximity to the one or more objects placed on the display, whereby providing a visual acknowledgement that the computer hardware has identified presence of the one or more objects (Macinnes, Fig. 5).

It would have been obvious to add the animated icons as taught by Macinnes to the display system of Yamazaki in view of Ikeda and Hamon in order to provide active visual feedback to the user when and input is made thus avoiding accidental selection of an undesired selectable option (Macinnes, pg. 3 last paragraph).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Hamon (US 2005/0179653 A1) as applied to claims 1, 3, 8-10, 12, 14-19 and 21 above, and further in view of Masters (US 6429857 B1) and Baur (US 5,610,629).

Regarding **Claim 20**, Yamazaki in view of Ikeda and Hamon fails to teach wherein the computer hardware is configured to perform a coarse scan using illumination to identify position of the one or more objects a fine scan, which is finer than the coarse scan, to identify details of the one or more objects using illumination generated by the display.

Masters teaches a coarse scan operated after a fine scan (Masters, Figs. 5 and 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a coarse and then a fine scan as taught by Masters in the system of Yamazaki in view of Ikeda and Hamon in order to increasing the speed and accuracy of the scanning system.

Yamazaki in view of Ikeda Hamon and Masters fails to teach obscured *ambient* illumination as claimed. Baur teaches identifying position of one or more objects placed in proximity of the display by way of ambient illumination to the apparatus obscured by one or more objects (Baur, Col. 4 lines 20-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamazaki in view of Ikeda Hamon and Masters' display to identify positions using ambient illumination as well as input device illumination, as taught by Baur, in order to provide a more energy efficient mode of touch detection.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Breen (US 20040117735 A1).

Regarding **Claim 11**, Yamazaki teaches a scanning display apparatus and method of operation (Yamazaki, Fig. 1 scanning display) comprising:

(a) a display operable:

(i) to receive one or more driver signals and generate corresponding visual information for presentation on the display (Yamazaki, Fig. 1 display portions receive driver signals and generate images); and

(ii) to sense radiation received at the display and generate one or more sensing signals corresponding to a region proximate to the display (Yamazaki, Fig. 1 sensing portion senses radiation from pen); and

(b) computer hardware coupled to the display for generated the one or more driver signals for the display and for receiving the one or more sensing signals from the display (Yamazaki, Fig. 1 source and gate drivers), the computer hardware being operable to provide an interactive use interface at the display (Yamazaki, Figs. 15A-B and 21A-B);

the apparatus being arranged to present the user interface comprising a plurality of user interface features (Yamazaki, Fig. 15A-B, 21A-B).

Yamazaki fails to teach that the computer hardware is provided with a priority identifier for each of the features for determining which of the features to omit from the presentation in the user interface in a situation where at least part of the display is obscured.

Ikeda teach computer hardware provided with an identifier for parts of the display screen including certain sections of the GUI for determining which of the sections to omit from the presentation in the user interface in a situation where at least part of the display is obscured (Ikeda, Figs. 35-38 *each* element of the GUI which is the two subjects in question has a priority identifier associated there to).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the omitting feature of Ikeda to the display device of Yamazaki in order to reduce power consumption.

Yamazaki in view of Ikeda fails to teach a priority identifier for each of the features as claimed.

Breen teaches using a priority identifier for each of the features for determining which features to omit from an image when the image is cropped (Breen, Figs. 2 and 4).

It would have been obvious to add the priority identifier to the display system of Yamazaki as modified by Ikeda in order to allow for prioritized cropping of the displayed area as taught by Breen in order to provide the most important user interface items to the user when there is limited space on the display screen.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (US 2002/0079512) in view of Ikeda (US 2001/0020939) and Breen (US 20040117735 A1) as applied to claim 11 above, and further in view of Hamon (US 2005/0179653 A1).

Yamazaki in view of Ikeda and Breen fails to teach "by moving the at least part of the visual information from obscured parts of the display to the unobscured parts of the display for display substantially all the visual information on the unobscured parts". Hamon teaches moving at least part of the visual information from obscured parts of the display to the unobscured parts of the display for display substantially all the visual information on the unobscured parts (Hamon, Figs. 4 and 5 a smaller compressed

version of the GUI is shown on only the unobscured part). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Hamon's "moving" technique in combination with the cropping technique of Yamazaki in view of Ikeda and Breen in order to provide a more flexible interface for the user so that the user can view more information at the same time but at a lower resolution.

Response to Arguments

Applicant's arguments filed June 4th 2010 have been fully considered but they are not persuasive.

With regards to claims 1-5, 8-10 and 12-22 the applicant argues that the Ikeda fails to teach "an apparatus which is configured to sense one or more objects when placed on or positioned in proximity to the display and obscuring at least part of the visual information displayed on the display, and to adapt the visual information for display on the unobscured parts of the display which are unobscured by the one or more objects. Specifically the applicant argues that Ikeda does not **sense** one or more objects and also does not **adapt** the visual display. The examiner respectfully disagrees. Ikeda clearly senses the obstruction as per the claim limitations. The claims don't state what kind of sensor and since the display recognizes which parts of the display is obscured or unobscured that is equivalent to sensing as defined by the claim language. Further the applicant states that Ikeda merely display the unobscured parts of the GUI and doesn't display the obscured parts, the examiner believes that this is

inherently adaptive to the obstruction since it reacts to the obstruction and displays a different portion of the GUI accordingly which is the accepted definition of **adapt**.

Applicant's arguments with respect to claims 1-5, 8-10 and 12-22 and the newly added limitations have been considered but are moot in view of the new ground(s) of rejection.

With regards to claims 11 and 22 the applicant argues that Breen fails to teach "the computer hardware being provided with a **priority identifier** for each of the feature for determining which of the features to omit from presentation". The examiner respectfully disagrees. Breen clearly teaches priority identifiers, and as shown in Figs. 2 and 4 Breen also clearly shows that *each* element of the GUI is provided with a priority and the cropping is done accordingly. The applicant further argues that Breen teaches certain occurrences of exception which is not the same as what is claimed. The examiner is not arguing the fact that the exceptions have anything to do with the priority identifiers or that each of the features have priority identifiers. They are really two separate issues. The examiner is merely using the teaching of Breen to bringing the fact that when cropping images priority identifiers can be placed on *each* feature in order to prioritize the cropping routing.

The rejections are therefore maintained for Claim 11.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ke Xiao whose telephone number is (571)272-7776. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ke Xiao/
Examiner, Art Unit 2629